CRF Errors Edited by the STIC Systems Branch

| Serial | 1 Number: 09/908,992B CRF Edit Date: 1/23/04 Edited by: 1/23/04 |
|-------------|--|
| | Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line |
| | Corrected the SEQ ID NO. Sequence numbers edited were: |
| | Inscrted or corrected a nucleic number at the end of a nucleic line. SEQ ID |
| | NO's edited: |
| | Deleted:invalid beginning/end-of-file text; page numbers |
| | Inserted mandatory headings/numeric Rentifiers, specifically: |
| 1 | Moved responses to same line as heading/numeric identifier, specifically: |
| <u>J</u> | Other: Corrected (1607 response from 29" to "30" |

Revised 09/09/2003



1600

RAW SEQUENCE LISTING

DATE: 01/23/2004

PATENT APPLICATION: US/09/908,992B

TIME: 11:04:35

Input Set : A:\PTO.AMC.txt

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3 <110> APPLICANT: SYKEN, JOSH
          MUNGER, KARL
  6 <120> TITLE OF INVENTION: METHODS AND REAGENTS TO REGULATE APOPTOSIS
  8 <130> FILE REFERENCE: HMV-054.01
 10 <140> CURRENT APPLICATION NUMBER: 09/908,992B
 11 <141> CURRENT FILING DATE: 2001-07-19
 13 <150> PRIOR APPLICATION NUMBER: 60/219,718
 14 <151> PRIOR FILING DATE: 2000-07-19
 16 <150> PRIOR APPLICATION NUMBER: 60/219,537
 17 <151> PRIOR FILING DATE: 2000-07-20
 19 <160> NUMBER OF SEQ ID NOS: 30
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 30 <222> LOCATION: (32)..(1471)
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 37 cgc tgg ttg ctg gtg gtt gtg ggg acc ccg cgg ctg ccg gct ata tcg
 38 Arg Trp Leu Leu Val Val Val Gly Thr Pro Arg Leu Pro Ala Ile Ser
                                 15
             10
                                                                       148
 41 ggt aga ggg gcc cgg ccc agg gag ggc gtg gtg ggg gca tgg ctg
 42 Gly Arg Gly Ala Arg Pro Pro Arg Glu Gly Val Val Gly Ala Trp Leu
         25
                              30
 43
 45 age ege aag etg age gte eee gee ttt geg tet tee etg ace tet tge
                                                                       196
 46 Ser Arg Lys Leu Ser Val Pro Ala Phe Ala Ser Ser Leu Thr Ser Cys
                         45
                                                                       244
 49 ggc ccc cga gcg ctg ctg aca ttg aga cct ggt gtc agc ctt aca gga
 50 Gly Pro Arg Ala Leu Leu Thr Leu Arg Pro Gly Val Ser Leu Thr Gly
                     60
 53 aca aaa cat aac cct ttc att tgt act gcc tcc ttc cac acg agt gcc
                                                                       292
 54 Thr Lys His Asn Pro Phe Ile Cys Thr Ala Ser Phe His Thr Ser Ala
                 75
                                      80
 57 cct ttg gcc aaa gaa gat tat tat cag ata tta gga gtg cct cga aat
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 58 Pro Leu Ala Lys Glu Asp Tyr Tyr Gln Ile Leu Gly Val Pro Arg Asn
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 61 qcc agc cag aaa gag atc aag aaa gcc tat tat cag ctt gcc aag aag
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· 62 Ala Ser Gln Lys Glu Ile Lys Lys Ala Tyr Tyr Gln Leu Ala Lys Lys
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RAW SEQUENCE LISTING DATE: 01/23/2004 PATENT APPLICATION: US/09/908,992B TIME: 11:04:35

Input Set : A:\PTO.AMC.txt

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| 63 | | 105 | | | | | 110 | | | | | 115 | | • | | | |
| 65 | tat | cac | cct | gac | aca | aat | aag | gat | gat | ccc | aaa | gcc | aag | gag | aag | ttc | 436 |
| | | | | | Thr | | | | | | | | | | | | |
| | 120 | | | | | 125 | _ | | | | 130 | | | | | 135 | |
| | | caq | cta | σca | gaa | qcc | tat | gag | gtt | ttg | agt | gat | gag | gtg | aag | agg | 484 |
| 70 | Ser | Gln | Leu | Ala | Glu | Āla | Tvr | Ğlu | Val | Leu | Ser | Ásp | Glu | Val | Lys | Arg | |
| 71 | 501 | 0111 | 200 | | 140 | | - 1 - | | | 145 | | • | | | 150 | , | |
| | 224 | C 3 C | t 2.0 | aat | gcc | tac | aac | tct | aca | | ttc | gat | cct | aaa | acc | agc | 532 |
| | | | | | Ala | | | | | | | | | | | | ••• |
| | тÀ2 | GIII | IÀI | _ | Ала | т Ут | GTA | ser | | GIY | rne | лэр | 110 | 165 | MIG | 501 | |
| 75 | | | | 155 | | | | | 160 | | | | ~+~ | | 000 | ~~~ | 580 |
| | | | | | agc | | | | | | | | | | | | 500 |
| | GLy | Ser | | His | Ser | Tyr | Trp | | СТА | СТА | Pro | THE | | Asp | PIO | GIU | |
| 79 | | | 170 | | | | | 175 | | | | | 180 | | | | 600 |
| | | | | | aag | | | | | | | | | | | | 628 |
| 82 | Glu | Leu | Phe | Arg | Lys | Ile | Phe | Gly | Glu | Phe | Ser | | Ser | Ser | Phe | GLY | |
| 83 | | 185 | | | | | 190 | | | | | 195 | | | | | ' |
| 85 | gat | ttc | cag | acc | gtg | ttt | gat | cag | cct | cag | gaa | tac | ttc | atg | gag | ttg | 676 |
| 86 | Asp | Phe | Gln | Thr | Val | Phe | Asp | Gln | Pro | Gln | Glu | Tyr | Phe | Met | Glu | Leu | |
| 87 | 200 | | | | | 205 | | | | | 210 | | | | | 215 | |
| 89 | aca | ttc | aat | caa | gct | gca | aag | ggg | gtc | aac | aag | gag | ttc | acc | gtg | aac | 724 |
| | | | | | Āla | | | | | | | | | | | | |
| 91 | | | | | 220 | | _ | - | | 225 | | | | | 230 | | |
| | atc | atσ | σac | acq | tgt | gág | cqc | tqc | aac | ggc | aag | ggg | aac | gag | CCC | ggc | 772 |
| | | | | | | | | | | | | | | | | Gly | |
| 95 | | | 1- | 235 | - 1 | | , | - | 240 | - | - | - | | 245 | | _ | • |
| | acc | aaσ | ata | | cat | tac | cac | tac | | aac | aac | tcc | aac | atq | qaa | acc | 820 |
| | | | | | His | | | | | | | | | | | | • |
| 99 | 1111 | шуз | 250 | 0111 | 1115 | O y O | ***** | 255 | 0,10 | | 0-1 | | 260 | | | | |
| | ato | . 220 | | a aaa | cct | ++1 | t ata | | r cat | tco | a ac | a ta | | r aga | a tat | ggt | 868 |
| | | | | | | | | | | | | | | | | Gly | |
| 103 | | 26! | | . 01) | , ,, | , 111 | 270 | | | , | | 27. | | و | - <u>- 1</u> - | · 1 | |
| | | | | . + | | , at | | | 7 000 | tat | - at | | | - and | n aas | a gca | 916 |
| 100 | gge | cgc | - 990 | | . all | ; au | . Tl | | y CCC | Cur | . Va | 9 9 L' 1 Wai | Cue | ay ay | 9 99° | Ala Ala | 310 |
| | _ | | 3 617 | y ser | . 11e | | | e se. | r Er | o cy: | 29 | | г сус | 2 MI | 9 01) | 295 | |
| | 280 | | | | | 28 | | | | ~ ~+. | | | - ~+ <i>-</i> | · | - ~~ | | 964 |
| 105 | gga | a caa | a gco | c aag | g cag | j aa | a aaq | g cga | a gu | g acq | y al | o Dro | c ycy | y CC | - 71- | a gga | 704 |
| | | Y GII | и Ата | а гуз | | | з гу: | S AI | g va. | | | e Pr | J Val | r Er | | a Gly | |
| 111 | | | | | 300 | | | | | . 30! | | | | | 310 | | 1012 |
| 113 | gto | c gag | g gat | ggd | cag | ac | c gto | g age | g ato | g cci | t gt | g gg | a aaa | a ago | g gaa | att | 1012 |
| | | L Glı | ı Asp | | | Th: | r Va. | L Ar | | | o va | T GT | A г.А. | | | ı Ile | |
| 115 | | | | 315 | | | | | 320 | | | | | 32! | | | . 1000 |
| 117 | 7 tto | c att | t acq | g tto | c ago | g gt | g ca | g aaa | a ago | c cct | t gt | g tt | c cgg | g age | g gad | ggc | 1060 |
| 118 | Phe | e Ile | e Thi | r Phe | e Arç | y Va. | l Glı | n Ly: | s Sei | r Pro | o Va | l Ph | | | g Asp | Gly | |
| 119 | | | 330 | | | | | 33. | | | | | 340 | | | | |
| 121 | gca | a gad | c ato | c cad | c tac | ga | c cto | c tt | t att | t tct | t at | a gc | t caq | g gct | t ctt | ctt | 1108 |
| 122 | Ala | a Āsp | o Ile | e His | s Ser | As | o Lei | Phe د | e Ile | e Se | r Il | e Al | a Glr | n Ala | a Lei | Leu | |
| 123 | | 345 | | | | | 350 | | | | | 35 | | | | | |
| | | g qaa | a aca | a gco | aqa | gc | c ca | g ggi | c cto | g tad | c ga | g ac | g ato | c aad | c gtg | g acg | 1156 |
| 126 | GÍ. | ν Ğĺν | y Thi | r Āla | a Arc | Āl | a Gli | n Gĺ | y Lei | ı Ty: | r Gl | u Th | r Ile | e Ası | n Val | l Thr | |
| | 7 360 | | • | | - | 36. | | • | - | - | 37 | | | | | 375 | |
| | | - | | | | | | | | | | | | | | | |

RAW SEQUENCE LISTING DATE: 01/23/2004 PATENT APPLICATION: US/09/908,992B TIME: 11:04:35

Input Set : A:\PTO.AMC.txt

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| 130 | | | | | | | | | | | | | | | Gly 390 | | |
| 131 | aac | atc | CCC | caa | | aac | agc | tac | aac | | gga | gac | cac | tac | atc | cac | 1252 |
| 134 | | | | | | | | | | | | | | | Ile | | |
| 135 | O.L.y | 120 | | 395 | | | | - 1 - | 400 | - 2 | - 4 | _ | | 405 | | | |
| | atc | aag | ata | cga | gtt | cca | aag | agg | cta | acg | agc | cgg | cag | cag | agc | ctg | 1300 |
| 138 | Ile | Lys | Ile | Arg | Val | Pro | Lys | Arg | Leu | Thr | Ser | Arg | | Gln | Ser | Leu | |
| 139 | | | 410 | | | | | 415 | | | | | 420 | | | | |
| | | | | | | | | | | | | | | | gtg | | 1348. |
| | Ile | | Ser | Tyr | Ala | Glu | | GLu | Thr | Asp | Val | | GIY | Thr | Val | Asn | |
| 143 | | 425 | | | | | 430 | ~~+ | ~~~ | 200 | 200 | 435 | ant. | 200 | too | ac a | 1396 |
| | | | | | | | | | | | | | | | tcc Ser | | 1330 |
| 146 | _ | Val | TIII | ьец | TIIT | 445 | 261 | сту | СΙУ | Ser | 450 | riec | ASP | 501 | DCI | 455 | |
| | | agc | aad | act | agg | | gag | act | aaa | gag | | gag | gag | ασα | ttc | | 1444 |
| | | | | | | | | | | | | | | | Phe | | |
| 151 | 0-1 | | -1- | | 460 | | | | | 465 | - | | | - | 470 | | |
| | tcc | aaa | ctt | aag | aaa | atg | ttt | acc | tca | tgat | catco | cca ç | gccga | agga | aa | | 1491 |
| | Ser | | | | | | | | | | | | | | | | |
| 155 | | | | 475 | | | | | 480 | | | | | | | | |
| 157 | aaga | atcca | act q | ggaaa | acta | gg co | cggga | aagca | a gca | agcc | cctc | caaq | gggc | cag | ggcad | cctggg | 1551 |
| 159 | agad | eggga | agg a | attc | cagaa | ac a | gcago | cact | gago | ctcc | cacc | cgca | agago | cct | ctgga | acggcc | 1671 |
| 161 | ttgg | gcaad | cag (| caaaa | atcai | tg g | gacaa | acaco | C TCI | CCCC | cacg | gaaa | aggto | cac . | agtg | gacage | 1731 |
| 163 | ccgg | ggcag | gta q | ggato | gcago | 20 00 | cagaç | ggerg | g gre | ggcaq -tac: | gill | taas | aacto | att ' | ggta. attt | ggtgac ggaatt | 1791 |
| 167 | ggcc | -=++ | ta a | ratai | ctt: | yy ay ar ti | yayyı Taaac | racca | a taa | rttad | cado | ttac | raaat | tga | agcct | taagc | 1851 |
| | | | | | | | | | | | | | | | | cagaat | |
| 171 | gagt | tctt | cc 1 | tgaca | aggti | ta to | cttca | actgo | g gad | gcgt | gggg | ccc | ccag | gcc | ccac | cagcac | 1971 |
| 173 | cgto | cctc | ccc 1 | taat | gagg | gg co | cctg | ccgaq | g gca | atcag | gctg | ctct | cgcto | cag | ttagi | ttttta | 2031 |
| 175 | ttc | cggg | ggt a | accaa | agcag | gc to | gcaca | agtc | g gtg | gcct | ggga | agca | acgti | taa | aggc | ccagag | 2091 |
| 177 | agat | cct | ggg (| ggtt | ctgct | to to | gacc | gtgt | g ggt | tggt | gatc | ctt | gtca | gga | tgta | cagtcc | 2151 |
| 179 | ttg | ctcc | cac o | cccat | ccg | gg at | rggc | cgcct | gto | ccct | gact | att | gagto | cct | gttgi | ttgtaa | 2211 |
| 181 | gcca | aggca | atg (| gagg | gctc | ct go | cccti | ctg | c tga | agcca | acag | CCC | attgo | cag · | cacto | gtgctg | 2221 |
| 183 | gcca | agact | tc a | agct | gccti | tg g | gaacı | cgaaq | g cco | tana | cact | gtt | jeta - a a a f | jic . Fta | agggg | gcttgg | 2331 |
| 107 | ttet | .ccc | 4CC | taca +++ | 36961 3+++/ | rt a | sato | tatti | to: | .yaay | aaaa | aaa | rcaca | add - | ctaa | gtgcta gcagtt | 2451 |
| 107 | dicc | ratta | | | atte | gi ad an ta | radad | rcana | | rccc | atto | CCC | acci | tot : | acta | gtagca | 2511 |
| 191 | tata | racac | 1tt 1 | tocat | atai | tt to | caga | atcti | ca. | acto | atca | tta | raca | aat | taato | gaagaa | 2571 |
| 193 | cact | tct | caa (| caqti | tcct | tt ti | ttati | tttc | tti | tata | attc | acta | aaaat | taa . | agcat | ctatt | 2631 |
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| 199 | <211 | L> LI | ENGT | H: 14 | 4,43 | | | | | | | | | | | | |
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| | <213 | | | | Homo | o sap | piens | 5 | | | | | | | | | |
| | <220 | | | | ana | | | | | | | | | | | | |
| | <221 <222 | | | | | /1. | 1401 | | | | | | | | | | |
| | <400 | | | | | · • (T · | 140) | | | | | | | | | | |
| 201 | /40(| , , JI | ומטאֿר | ۰ شرب۰. | _ | | | | | | | | | | | | |

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/908,992B TIME: 11:04:35

DATE: 01/23/2004

Input Set : A:\PTO.AMC.txt

| 209 | atg Met | | | | | | | | | | | | | | | | 48 |
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| 210 | 1 | | | | 5 | | | | | | | | | | | | 0.0 |
| | ccg | | _ | - | _ | | _ | | _ | | | | | | | | 96 |
| 213 214 | Pro | Arg | Leu | Pro 20 | Ala | Ile | Ser | Gly | Arg 25 | Gly | Ala | Arg | Pro | Pro 30 | Arg | Glu | |
| 216 | ggc | gtg | gtg | ggg | gca | tgg | ctg | agc | cgc | aag | ctg | agc | gtc | ccc | gcc | ttt | 144 |
| | Ğly | | | | | | | | | | | | | | | | J |
| 218 | - | | 35 | - | | _ | • | 40 | _ | - | | | 45 | | | | • |
| | qcq | tct | | cta | acc | tct | tac | aac | ccc | cga | aca | cta | ctq | aca | tta | aga | 192 |
| | Ala | | | _ | | | _ | | | _ | _ | | | | | | |
| 222 | | 50 | · · | | | ~ ~ ~ | 55 | 1 | | 9 | | 60 | | | | , | |
| | cct | | ata | 200 | ctt | 202 | | aca | aaa | cat | a'a c | | ttc | att | tat | act | 240 |
| | Pro | | | | | | | | | | | | | | | | 210 |
| | | сту | vaı | ser | ьеи | 70 | дту | TIIT | шуз | 1113 | 75 | 110 | THE | 116 | Cys | 80 | |
| 226 | | 4 | | | | | ~~~ | ~~+ | ++~ | ~~~ | | ~~~ | ant. | + - + | + - + | | 288 |
| | gcc | | | | _ | _ | - | | _ | - | | - | | | | | 200 |
| | Ala | Ser | Phe | HlS | | Ser | Ата | Pro | ьeu | | ьуs | GIU | Asp | Tyr | | GIII | |
| 230 | | | | | 85 | | | | | 90 | | | | | 95 | | 226 |
| | ata | | | | | | | | | | | | | | | | 336 |
| 233 | Ile | Leu | Gly | Val | Pro | Arg | Asn | Ala | | Gln | Lys | Glu | Ile | | Lys | Ala | |
| 234 | | | | 100 | | | | | 105 | | | | | 110 | | | |
| 236 | tat | | _ | | _ | _ | _ | | | | | | | | | | 384 |
| 237 | Tyr | Tyr | Gln | Leu | Ala | Lys | Lys | Tyr | His | Pro | Asp | Thr | Asn | Lys | Asp | Asp | |
| 238 | | | 115 | | | | | 120 | | | | | 125 | | | | |
| 240 | CCC | aaa | gcc | aag | gag | aag | ttc | tcc | cag | ctg | gca | gaa | gcc | tat | gag | gtt | 432 |
| 241 | Pro | Lys | Āla | Lys | Glu | Lys | Phe | Ser | Gln | Leu | Ala | Glu | Ala | Tyr | Glu | Val | |
| 242 | | 130 | | _ | | _ | 135 | | | | | 140 | | | | | |
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| | Leu | | | | | | | | | | | | | | | | |
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| | ggc | ttc | gat | cct | aaa | | aσc | aac | tcc | caq | | aαc | tac | taa | aaq | qqa | 528 |
| | Gly | | | | | | | | | | | | | | | | |
| 250 | 011 | 20 | 1101 | | 165 | | | 1 | | 170 | | | - ,2 | - | 175 | - | |
| | ggc | CCC | act | ata | | CCC | gag | gag | cta | | agg | aaα | atc | ttt | aac | gag | 576 |
| | Gly | | | | | | | | | | | | | | | | |
| 254 | OLy | 110 | 1111 | 180 | пор | 110 | 014 | 014 | 185 | 1110 | | 270 | | 190 | 4-1 | | |
| | ttc | + 00 | + 00 | | + < > | +++ | aas | ast | | cad | 200 | ata | +++ | | cad | cct | 624 |
| | Phe | | | | | | | | | | | | | | | | 021 |
| | PHE | ser | | Ser | ser | rne | дту | 200 | riie | GIII | 1111 | Val | 205 | лэр | GIII | 110 | |
| 258 | | | 195 | | | ~~~ | ++~ | | ++~ | a a + | ~~~ | ~at | | 224 | ~~~ | ata | 672 |
| | cag | | | | | | | | | | | | | | | | 012 |
| | Gln | | Tyr | Pne | мет | GIU | | Thr | Pne | ASII | GIII | | Ата | гуу | сту | vaı | |
| 262 | | 210 | | | | | 215 | | | | | 220 | | | . | | . 200 |
| | aac | | | | | | | | | | | | | | | | 720 |
| | Asn | Lys | Glu | Phe | Thr | | Asn | lle | Met | Asp | | Cys | GLu | Arg | Cys | | |
| | 225 | | | | | 230 | | | | | 235 | | | | | 240 | 5.66 |
| | ggc | | | | | | | | | | | | | | | | 768 |
| | Gly | Lys | Gly | Asn | | Pro | Gly | Thr | Lys | | Gln | His | Cys | His | | Cys | |
| 270 | | | | | 245 | | | | | 250 | | | | | 255 | | |
| 272 | ggc | ggc | tcc | ggc | atg | gaa | acc | atc | aac | aca | ggc | cct | ttt | gtg | atg | cgt | 816 |

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PATENT APPLICATION: US/09/908,992B

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|------------|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| 276 | tcc Ser | acg Thr | tgt Cys 275 | agg Arg | aga Arg | tgt Cys | ggt Gly | ggc Gly 280 | cgc Arg | ggc Gly | tcc Ser | atc Ile | atc Ile 285 | ata Ile | tcg Ser | ccc Pro | 864 |
| 280 | tgt Cys | gtg Val 290 | gtc | tgc Cys | agg Arg | gga Gly | gca Ala 295 | gga Gly | caa Gln | gcc Ala | aag Lys | cag Gln 300 | aaa Lys | aag Lys | cga Arg | gtg Val | 912 |
| 284 | Met | atc | cct Pro | gtg Val | cct Pro | gca Ala 310 | gga Gly | gtc Val | gag Glu | gat Asp | ggc Gly 315 | cag Gln | acc Thr | gtg Val | agg Arg | atg Met 320 | 960 |
| 288 | cct | gtg Val | gga Gly | aaa Lys | agg Arg 325 | gaa Glu | att Ile | ttc Phe | att Ile | acg Thr 330 | ttc Phe | agg Arg | gtg Val | cag Gln | aaa Lys 335 | agc Ser | 1008 |
| 292 | cct Pro | gtg Val | ttc Phe | cgg Arg 340 | agg Arg | gac Asp | ggc Gly | gca Ala | gac Asp 345 | atc Ile | cac His | tcc Ser | gac Asp | ctc Leu 350 | ttt Phe | att. Ile | 1056 |
| 296 | tct Ser | ata Ile | gct Ala 355 | cag Gln | gct Ala | ctt Leu | ctt Leu | ggg Gly 360 | gga Gly | aca Thr | gcc Ala | aga Arg | gcc Ala 365 | cag Gln | ggc | ctg Leu | 1104 |
| 300 | tac Tyr | gag Glu 370 | acg | atc Ile | aac Asn | gtg Val | acg Thr 375 | atc Ile | ccc Pro | cct Pro | ggg Gly | act Thr 380 | cag Gln | aca Thr | gac Asp | cag Gln | 1152 |
| 304 305 | aag Lys 385 | att | cgg Arg | atg Met | ggt Gly | ggg Gly 390 | aaa Lys | ggc Gly | atc Ile | ccc Pro | cgg Arg 395 | att Ile | aac Asn | agc Ser | tac Tyr | ggc Gly 400 | 1200 |
| 308 | tac | gga Gly | gac Asp | cac His | tac Tyr 405 | atc Ile | cac His | atc Ile | aag Lys | ata Ile 410 | cga Arg | gtt Val | cca Pro | aag Lys | agg Arg 415 | cta Leu | 1248 |
| 312 | acg Thr | agc Ser | cgg Arg | cag Gln 420 | cag Gln | agc Ser | ctg Leu | atc Ile | ctg Leu 425 | agc Ser | tac Tyr | gcc Ala | gag Glu | gac Asp 430 | gag Glu | aca Thr | 1296 |
| 316 | gat Asp | gtg Val | gag Glu 435 | ggg | acg Thr | gtg Val | aac Asn | ggc Gly 440 | gtc Val | acc Thr | ctc Leu | acc Thr | agc Ser 445 | tct Ser | ggt Gly | ggc Gly | 1344 |
| 320 | Ser | acc Thr 450 | atg | gat Asp | agc Ser | tcc Ser | gca Ala 455 | gga Gly | agc Ser | aag Lys | gct Ala | agg Arg 460 | cgt Arg | gag Glu | gct Ala | ggg Gly | 1392 |
| 324 325 | gag | gac | gag Glu | gag Glu | gga Gly | ttc Phe 470 | ctt Leu | tcc Ser | aaa Lys | ctt Leu | aag Lys 475 | aaa Lys | atg Met | ttt Phe | acc Thr | tca Ser 480 | 1440 |
| 328 331 | tga <210 <211 | | | | | 1,0 | | | | | | | | | | | 1443 |
| 334 336 | <220 | 3> 01 0> F1 | RGAN: EATU | ISM: RE: | Hom | o sa | pien | S | • | | | | | | | | |
| | <222 <222 | | | | | (1 | 359) | | | | | | | | | | |

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/908,992B
TIME

DATE: 01/23/2004 TIME: 11:04:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\01232004\I908992B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:28; Xaa Pos. 206,207,208,209,210,211,212,213,214,215,216,217,218,219

Seq#:28; Xaa Pos. 220,221,222,223,224

Seq#:29; Xaa Pos. 206,207,208,209,210,211,212,213,214,215,216,217,218,219

Seq#:29; Xaa Pos. 220,221,222,223,224

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/908,992B

DATE: 01/23/2004 TIME: 11:04:36

Input Set : A:\PTO.AMC.txt

| L:1237 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:28 | after | pos.:192 |
|--------|-------|----|------|-----|----|-------|-------|-----|-----|--------|-------|----------|
| L:1240 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:28 | after | pos.:208 |
| L:1339 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:29 | after | pos.:192 |
| L:1342 | M:341 | W: | (46) | "n" | or | "Xaa" | used, | for | SEQ | ID#:29 | after | pos.:208 |



1600

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/908,992B

DATE: 01/16/2004
TIME: 14:25:55

Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\01162004\I908992B.raw

ERRORED SEQUENCES

| • | ED SE | 2 CORT | (CED | | | | | _ | | | _ | | | | | | |
|---|-------|--------|-------|-------|-------|------|-----|---------------|------|---------|-------|------|------|-------|-------|--------|---------------|
| | | | | | | | 1 | \mathcal{A} | | ا مما | In | | Ę | dos | Nor | Com | ply Needed |
| | 1390 | <210 |)> SE | EQ II | O NO: | : 30 | La | y z | | ,,,,,,, | 14 | ,] (| orre | C.J. | Diale | VUIII | ply |
| | 1391 | <211 | L> LE | ENGTH | 1: 4: | 53 | | | N | ibm | יייענ | *4 | • | . o L | LISK. | atte i | Needed |
| | | | | | | | | | 10 | file | | | | ן שען |) 7 | | |
| | 1393 | | | | | | sar | oiens | 3 | June 1 | • | | , | (| 10 | • | |
| | 1395 | | | | | | | | | V | | | _ | | | | |
| | 1397 | Met | Ala | Ala | Arg | Cys | Ser | Thr | Arg | Trp | Leu | Leu | Val | Val | Val | | Thr |
| | 1398 | | | | | 5 | | | | | 10 | | ` | | | 15 | |
| | 1401 | Pro | Arg | Leu | Pro | Ala | Iļe | Ser | Gly | Arg | Gly | Ala | Arg | Pro | Pro | Arg | Glu |
| | 1402 | | | | 20 | | | | | 25 | | | | | 30 | | |
| | 1405 | Gly | Val | Val | Gly | Ala | Trp | Leu | Ser | Arg | Lys | Leu | Ser | Val | Pro | Ala | Phe |
| | 1406 | | | 35 | | | | | 40 | | | | | 45 | | | |
| | 1409 | Ala | Ser | Ser | Leu | Thr | Ser | Cys | Gly | Pro | Arg | Ala | Leu | Leu | Thr | Leu | Arg |
| | 1410 | | 50 | | | | | 55 | | | | | 60 | | | | |
| | 1413 | Pro | Gly | Val | Ser | Leu | Thr | Gly | Thr | Lys | His | Asn | Pro | Phe | Ile | Cys | Thr |
| | 1414 | 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| | 1417 | Ala | Ser | Phe | His | Thr | Ser | Ala | Pro- | Leu | Ala | Lys | Glu | Asp | Tyr | Tyr | Gln |
| | 1418 | | | | | 85 | | | | | 90 | | | | | 95 | |
| | 1421 | Ile | Leu | Gly | Val | Pro | Arg | Asn | Ala | Ser | Gln | Lys | Glu | Ile | Lys | Lys | Ala |
| | 1422 | | | | 100 | | | | | 105 | | | | | 110 | | |
| • | 1425 | Tyr | Tyr | Gln | Leu | Ala | Lys | Lys | Tyr | Gln | Pro | Asp | Thr | Asn | Lys | Asp | Asp |
| | 1426 | | | 115 | | | | | 120 | | | | | 125 | | | |
| | 1429 | Pro | Lys | Ala | Lys | Glu | Lys | Phe | Ser | Gln | Leu | Ala | Glu | Ala | Tyr | Glu | Val |
| | 1430 | | 130 | | | | | 135 | | | | | 140 | | • | | |
| | 1433 | Leu | Ser | Asp | Glu | Val | Lys | Arg | Lys | Gln | Tyr | Asp | Ala | Tyr | Gly | Ser | Ala |
| | 1434 | | | _ | | | 150 | | | | | 155 | | | | | 160 |
| | 1437 | Gly | Phe | Asp | Pro | Gly | Ala | Ser | Gly | Ser | Gln | His | Ser | Tyr | Trp | Lys | Gly |
| | 1438 | _ | | - | | 165 | | | _ | | 170 | | | | | 175 | |
| | | | | | | | | | | | | | | | | | |

RAW SEQUENCE LISTING DATE: 01/16/2004 PATENT APPLICATION: US/09/908,992B TIME: 14:25:55

Input Set : A:\PTO.FG.txt

| 1441 1442 | Gly | Pro | Thr | Val 180 | Asp | Pro | Glu | Glu | Leu 185 | Phe | Arg | Lys | Ile | Phe 190 | Gly | Glu |
|--------------|------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1445 1446 | | Ser | Ser 195 | Ser | Ser | Phe | Gly | Asp 200 | Phe | Gln | Thr | Val | Phe 205 | Asp | Gln | Pro |
| 1449 1450 | Gln | Glu 210 | Tyr | Phe | Met. | Glu | Leu 215 | Thr | Phe | Asn | Gln | Ala 220 | Ala | Lys | Gly | Val |
| 1453 1454 | | Lys | Glu | Phe | Thr | Val 230 | Asn | Ile | Met | Asp | Thr 235 | Cys | Glu | Arg | Cys | Asn 240 |
| 1457 1458 | Gly | Lys | Gly | Asn | Glu 245 | Pro | Gly | Thr | Lys | Val 250 | Gln | His | Cys | His | Tyr 255 | Cys |
| 1461 1462 | Gly | Gly | Ser | Gly 260 | Met | Glu | Thr | Ile | Asn 265 | Thr | Gly | Pro | Phe | Val 270 | Met | Arg |
| 1465 1466 | | Thr | Cys 275 | Arg | Arg | Cys | Gly | Gly 280 | Arg | Gly | Ser | Ile | Ile 285 | Ile | Ser | Pro |
| 1469 1470 | _ | Val 290 | Val | Cys | Arg | Gly | Ala 295 | Gly | Gln | Ala | Lys | Gln 300 | Lys | Lys | Arg | Val |
| 1473 1474 | | Ile | Pro | Val | Pro | Ala 310 | Gly | Val | Glu | Asp | Gly 315 | Gln | Thr | Val | Arg | Met 320 |
| 1477 1478 | Pro | Val | Gly | Lys | Arg 325 | Glu | Ile | Phe | Ile | Thr 330 | Phe | Arg | Val | Gln | Lys 335 | Ser |
| 1481 1482 | Pro | Val | Phe | Arg 340 | Arg | Asp | Gly | Ala | Asp 345 | Ile | | Ser | Asp | Leu 350 | Phe | Ile |
| 1485 1486 | Ser | Ile | Ala 355 | Gln | Ala | Leu | Leu | Gly 360 | Gly | Thr | Ala | Arg | Ala 365 | Gln | Gly | Leu |
| 1489 1490 | - | Glu 370 | Thr | Ile | Asn | Vál | Thr 375 | Ile | Pro | Pro | Gly | Thr 380 | Gln | Thr | Asp | Gln |
| 1493 1494 | - | Ile | Arg | Met | Gly | Gly 390 | Lys | Gly | Ile | Pro | Arg 395 | Ile | Asn | Ser | Tyr | Gly 400 |
| 1497 1498 | Tyr | Gly | Asp | His | Tyr 405 | Ile | His | Ile | Lys | Ile 410 | Arg | Val | Pro | Lys | Arg 415 | Leu |
| 1501 1502 | Thr | Ser | Arg | Gln 420 | Gln | Ser | Leu | Ile | Leu 425 | Ser | Tyr | Ala | Glu | Asp 430 | Glu | Thr |
| 1505 1506 | Asp | Val | Glu 435 | Gly | Thr | Val | Asn | Gly 440 | Val | Thr | Leu | Thr | Ser 445 | Ser | Gly | Lys |
| 1509 1510 | Arg | Ser 450 | | _ | | | | | | | | | | | | |
| > 1511 | (- J | | d | eli | ti | • | | | | | | | ÷ | | | |

VERIFICATION SUMMARY

DATE: 01/16/2004 TIME: 14:25:56 PATENT APPLICATION: US/09/908,992B

Input Set : A:\PTO.FG.txt

Output Set: N:\CRF4\01162004\I908992B.raw

L:1237 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:192

M:341 Repeated in SeqNo=28

L:1339 $\dot{\text{M}}$:341 $\dot{\text{W}}$: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:192

M:341 Repeated in SeqNo=29

L:1511 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:30

L:19 M:203 E: No. of Seq. differs, <160> Number Of Sequences:Input (29) Counted (30)